

# Collider-Accelerator Department

## FY 2002 Self-Assessment Report

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1/31/03  
Date

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## **I. Collider-Accelerator Department (C-AD) Mission**

In support of Brookhaven National Laboratory's broad mission of providing excellent science and advanced technology in a safe, environmentally responsible manner the Collider Accelerator Department is committed to the following:

- ❖ Excellence in environmental responsibility and safety in all C-A department operations.
- ❖ Develop, improve and operate the suite of proton/heavy ion accelerators used to carry out the program of accelerator-based experiments at BNL.
- ❖ Support the experimental program including design, construction and operation of the beam transports to the experiments and partial support of detector and research needs of the experiments.
- ❖ Design and construct new accelerator facilities in support of the BNL and National Missions.

## **II. Self-Assessment Program**

The objective of the C-A self-assessment program is to provide a systematic approach to performance management. That is, to provide C-A management with information needed to ensure organizational performance objectives are being met and appropriate improvement actions are identified and implemented.

Supporting information for the objectives of Critical Outcome 1.0, Basic Science & Technology, are reported in the BNL Integrated Information Management System. This system provides the data required for the preparation of BNL Appendix B Self Evaluation Reports.

C-A Self-Assessment supporting information e.g. [Program and Facility](#), [Organization](#), [ESHQ Division](#), [Assessment and Inspection Programs](#), [C-A Environmental Management Program](#), [Authorization Basis Documents](#), [Operations and Procedures Manual](#), [Conduct of Operations Agreement](#), [Training Programs and Associated Records](#) and [Tier 1 Safety Inspections](#) is maintained on the Collider-Accelerator web site.

The C-A Department has adopted a self-assessment framework primarily based on the Malcolm Baldrige National Quality Award Criteria. Which are as follows

- Leadership Commitment and Involvement
- Human Resource Development and Management
- Customer Focus and Satisfaction (Customer Value)
- Process Management
- Business and Operational Results
- Compliance with Laws Regulations and Contractual Requirements

### **1.0 Evaluation of Objectives and Measures**

For each of the assessment criteria stated above, C-AD has established objectives, strategies, performance measures and indicators where appropriate. Refer to matrix within this document. A brief summary of C-A performance items, which were not captured in the matrix, is listed below.

#### A. Occurrence Reports, Nonconformance Reports and Investigations

- Reportable occurrences continue to trend downward. Refer to [C-A Performance Indicators](#).
- Three Nonconformance Reports (NCRs) were issued in FY02. All were the result of the internal EMS Assessment. Corrective actions were tracked to closure in the C-A Family ATS.
- As a result of seven Radiological Awareness Reports (RAR), six Causal Investigations were performed. When required, recommended corrective/preventative actions were tracked to closure in the C-A Family ATS.
- Thirteen critiques were performed at the direction of C-A ESHQ management. All recommended actions were tracked to closure in the C-A Family ATS.

#### B. EMS

The ISO 14001 registration audit was conducted on June 4 through 7. There were no findings for the C-A Department. ISO 14001 registration maintained. The C-A [Management Review of C-A Department's Environmental Management System and Self Assessment Program](#) was convened on August 7, 2002. The agenda for the meeting including discussions on the following topics.

##### Environmental Management Review Agenda

- Overview of programs that impact environment
- Audit results
- Review of FY 01 Record of Decision
- Stakeholder concerns
- EMS improvements
- Pollution prevention initiatives
- Environmental performance
- Environmental financial investments
- Evaluation by senior management

##### Self-Assessment Agenda:

- Performance vs. objectives and measures
- External assessments
- Internal assessments
- Evaluation by senior management

#### C. Assessments

The C-A Department conducted the annual Department Self-Assessment, annual EMS Assessment, annual Environmental Management Review, 24 worker and supervisor self-evaluations, 22 QA assessments, 39 Tier 1 inspections, 52 90-Day Area inspections and 144 inspections of satellite-waste stations. Action items resulting from these internal assessments/reviews were tracked to closure in the C-A Family ATS.

The overall conclusions of these audits were: well written program descriptions, excellent operational procedures, well written and descriptive plans and forms, an excellent

commitment by staff and users to the laboratory's policies and an excellent system for control of operations.

## **2.0 FY03 Improvement Planning**

The following summarizes the planned improvement activities to be implemented during FY 2003. All activities will be tracked in the C-A Family ATS.

1. Establish a database for assessments performed by external organizations on the C-A Department.
2. Continue to ensure environmental impacts of a fire within the C-A facility are submitted with ESH-related or infrastructure-related Activity Data Sheets; especially ADSs related to the fire-detection system.
3. Continue to work at defining and allocating resources to remove legacy materials. For example, arrange to dispose of the SREL magnet.
4. Evaluate Water Systems Group's process for the testing of devices within C-A Cooling Water Systems
5. Meet with the Environmental Restoration Division and review the EE/CA recommendations for the g-2 plume. Close out the Action Memorandum with the EPA by the targeted date.
6. Assess implementation of C-A OPM 2.28, C-A Procedure For Enhanced Work Planning, key criteria is worker's perspective of their involvement in work planning and control activities.
7. Perform implementation assessments of the following procedures.
  - OPM 13.4.1, Records Management
  - OPM 13.4.2, Records Index
  - OPM 13.6.1 Preparation & Issuance of Engineering Drawings /Specs, and
  - OPM 13.6.2 Configuration Management
8. Continue to employ the BNL Quality Program and Services Office to provide assistance in performing scheduled C-A assessments.

## **3.0 Institutional Improvement Recommendations**

The following lab-wide issues were documented in the C-A Environmental Management Review Record of Decision. The C-A Family ATS will be used to document the status of each recommendation.

1. BNL to consider the addition of a second Fire Safety Engineer.
2. For greater efficiency, individual Department/Division 90-day storage areas should be combined into one 90-day storage area located in the Waste Management facility.

3. BNL should examine and reduce waste management costs in a manner that reflects the actual cost of efficient waste handling and disposal.
4. SBMS should be modified such that external construction projects impacting a Department/Division would require Department/Division active involvement in the design, planning and approval process.

| <i>ASSESSMENT CRITERIA 1: Leadership Commitment and Involvement</i>   |            |                          |                          |
|---|------------|--------------------------|--------------------------|
| <i>OBJECTIVE:</i><br>Excellence in environmental responsibility and safety in all Department operations.  |            |                          |                          |
| <i>APPROACH:</i><br>ES&H <ul style="list-style-type: none"> <li>a) Conduct an EMS management review in accordance with the “Environmental Assessments” Subject Area to ensure the continuing suitability, adequacy and effectiveness of the EMS.</li> <li>b) Successfully undergo the ISO 14001 surveillance audit.</li> </ul>                      |            |                          |                          |
| Measures  | Indicators | Responsibility           | Schedule/Due Date        |
| Management Review Completed in accordance with the “Environmental Assessments” Subject Area. Management review completed and “Record of Decision” issued  | N/A        | EMS Representative       | Annual<br>September 2002 |
| <u>Results:</u><br>C-A Department Environmental Management System (EMS) <a href="#">Management Review</a> was convened on August 7, 2002. Environmental Management Review <a href="#">Record of Decision</a> issued on August 14, 2002. Action items are being tracked to closure in the C-A Family ATS (1272).<br><br><u>Action Items:</u><br>None |            |                          |                          |
| ES&H SAM- Maintain ISO 14001 Registration<br>ISO 14001 surveillance audit performed by third party, ISO 14001 registration maintained. (ES&H SAM)   | N/A        | Associate Chair for ESHQ | Annual<br>June 2002      |
| <u>Results:</u><br>The ISO 14001 registration audit was conducted on June 4 through 7. There were no findings for the C-A Department. ISO 14001 registration maintained. (ES&H SAM)<br><br><u>Action Items:</u><br>None   |            |                          |                          |

**ASSESSMENT CRITERIA 2: Human Resource Development and Management**

**OBJECTIVE:**

- 1 Create a pool of talented, empowered, motivated, and goal oriented leaders/managers/workers to support and enhance the C-A competitive position within the DOE laboratory complex.
- 2 Provide a high quality work environment that enhances C-A's ability retain and attract an excellent workforce.

**APPROACH:**

- 1 Planning for staff development is accomplished via the C-A long-range staffing plan.
- 2 Training is promoted via the C-A Training Plan as described in OPM 1.12, Conduct of Training Policy (Training Plan).
- 3 The overall training strategy is found in two documents:
  - a) [Training Plan Agreement](http://www.rhichome.bnl.gov/AGS/Accel/SND/Training/trainplan.pdf) (http://www.rhichome.bnl.gov/AGS/Accel/SND/Training/trainplan.pdf)
  - b) [Training Plan](http://www.rhichome.bnl.gov/AGS/Accel/SND/OPM/Ch01/01-12.PDF) (http://www.rhichome.bnl.gov/AGS/Accel/SND/OPM/Ch01/01-12.PDF)
- 4 Environmental training, which is process specific, may be found at: [Training-Process Specific](http://www.esh.bnl.gov/esd/Internal/ags/C-A.htm) (http://www.esh.bnl.gov/esd/Internal/ags/C-A.htm)
- 5 C-A promotes education of its staff through the laboratory reimbursement program for continued college-level education. In addition, C-A encourages and supports its staff to attend technical industrial courses as well as various accelerator and high energy and nuclear physics conferences.
- 6 Via C-A OPM 9.4.2, Self Evaluations, a self-critical attitude is fostered throughout the department from workers to senior management, this provides the basis for correcting weaknesses as well as promoting best practices. A self-assessment database for action required/completed is maintained by the C-A ESHQ Division.
- 7 Feedback on completed work permits is maintained by the C-AD.
- 8 Perform periodic assessments to determine adequacy and effectiveness of listed strategies to achieve objective.

| Measures   | Indicators                        | Responsibility                | Schedule/Due Date       |
|--|-----------------------------------|-------------------------------|-------------------------|
| Management & Operations SAM – Training and Qualifications<br>Training and Qualification (T&Q) Performance<br>Permanent Employees <ol style="list-style-type: none"> <li>1. % of C-A staff linked to job specific training assessments.<br/>(outstanding rating is <math>\geq 95\%</math>)</li> <li>2. % of T&amp;Q requirements completed by C-A staff<br/>(outstanding rating is <math>\geq 95\%</math>)</li> </ol> Transient Staff <ol style="list-style-type: none"> <li>1. % of staff linked to job specific training assessments.<br/>(outstanding rating is <math>\geq 80\%</math>)</li> <li>2. % of T&amp;Q requirements completed by staff<br/>(outstanding rating is <math>\geq 80\%</math>)</li> </ol> | % of required training completed. | Training & Procedures Manager | Semiannual<br>June 2002 |

Results:

Permanent Staff

1. The percentage of permanent staff linked to appropriate JTA's has been maintained at or above 95%.
  2. The percentage of permanent staff complete in their training requirements has been maintained at or above 95%.
- As of 1/22/03, the percentage of permanent staff complete in their training requirements is at 97%.

Transient Staff

- The percentage of transient C-AD Guests linked to appropriate JTA's has been maintained at or above 80%.
2. The percentage of transient C-AD Guests complete in their training requirements has been maintained at or above 80%.
- As of 1/22/03, the percentage of transient C-AD Guests complete in their training requirements is at 91%.

Action Items:

None



| <i>ASSESSMENT CRITERIA 3: Customer Focus and Satisfaction (Customer Value)</i>  |  |                     |                       |
|---|--|---------------------|-----------------------|
| <i>OBJECTIVE:</i> Operate the C-A facility in a manner that is responsive to C-A internal and external customer expectations.   |  |                     |                       |
| <p><i>APPROACH:</i></p> <ol style="list-style-type: none"> <li>1. Understanding of customer and market needs is accomplished via discussions, formal proposals and formal agreements between experimenters (users) and C-A staff.</li> <li>2. Stakeholders inquiries related to the operation of the C-A are recorded in the BNL Correspondence and Commitment Tracking System maintained by the Collider-Accelerator Department</li> <li>3. Support BNL's initiative regarding the BNL Communication and Trust critical outcome.</li> <li>4. Customer and stakeholder expectations are identified in Memoranda of Agreement/Understanding between C-A Operations and the facility users. Integrating user and performance expectations into the C-A management systems is accomplished by setting operational goals, which are documented in OPM 2.1, C-A Operations Organization &amp; Administration.</li> <li>5. The AGS/RHIC Users Committee is a committee that represents the user community in various matters, such as programmatic satisfaction and dissatisfaction, quality of life matters, etc. They communicate both verbally and in writing to the directorate as well as line managers.</li> <li>6. C-A appoints a liaison-physicist and engineer to each experiment. These individuals communicate with the Experimental Spokesperson, who is chosen from among the users. During construction of experiments, users meet with liaison engineers on a weekly (sometimes daily) basis, to layout experimental apparatus. This interaction allows users to have input at the design stage and leads to optimum layout for efficient running of experimental apparatus.</li> <li>7. During operations, the weekly Time Meetings allow experimenters to discuss status, identify scheduling priorities, identify user requirements for the up coming week, voice complaints and at the same time, provide easy immediate access to all the C-A resources and staff.</li> <li>8. Perform periodic assessments to determine adequacy and effectiveness of listed strategies to achieve objective.</li> </ol> |  |                     |                       |
| Measures  | Indicators   | Responsibility      | Schedule/Due Date     |
| Measure 3.5.2, Stakeholder Involvement and Understanding<br>Verify senior management is aware of the requirements of the Laboratory Decision-Making and Community Involvement subject area.   | Completion of the Laboratory Decision-Making and Community Involvement training program. | Department Chairman | Annual<br>August 2002 |
| <p><u>Results:</u><br/>C-A Department Chair has completed BNL Decision-Making and Community Involvement training program (6/02).<br/>To facilitate the implementation of the Community Involvement in Laboratory Decision-Making subject are, C-A OPM 1.10.3, Guidance on Community Involvement, was prepared and issued.</p> <p><u>Action Items:</u><br/>None</p>  |  |                     |                       |
| Verify that community involvement requirements have been incorporated into senior management's R2A2.  | R2A2 updated and approved  | Department Chairman | Annual<br>August 2002 |
| <p><u>Results:</u><br/>Community involvement requirements have been incorporated into senior management's R2A2</p> <p><u>Action Items:</u><br/>None</p>   |  |                     |                       |

|  |            |                    |                     |
|--|------------|--------------------|---------------------|
| <i>ASSESSMENT CRITERIA 4: Process Management</i>   |            |                    |                     |
| <b>OBJECTIVE:</b><br>Establish, maintain and improve C-A processes/procedures for implementing Laboratory and organizational expectations.   |            |                    |                     |
| <b>APPROACH:</b><br>1 Implement the requirements of ESH Standard 1.3.5. C-A OPM 9.2.1, Procedure For Reviewing Environmental, Health and Safety Aspects Of An Experiment ensures C-A complies with BNL requirements for the planning and control of experiments as defined in ESH Standard 1.3.5<br>2 Implement work planning and controls requirements per ESH Standard 1.3.6. C-A OPM 2.28, C-A Procedure For Enhanced Work Planning (which includes Stop Work policy) ensures C-A complies with BNL requirements for work planning and control systems as defined in ESH Standard 1.3.6. Assessment of the implementation of the C-A work planning process is performed as part of the C-A Tier I Inspections. All EWP systems within C-A shall be reviewed at a frequency specified by the C-A Work Control Manager.<br>3 Implementation of the BNL ES&H programs, including the EMS, and Conduct of Operations is verified via scheduled inspections, audits and C-A management, independent and self-assessments. These programs are documented in OPM Chapter 9 procedures (e.g. Tier I and Self-Evaluations), C-A OPM 13.10.1, Independent Assessments and applicable subject areas. Reports are documented and include a description of the findings, corrective action(s), and identification of responsible individual(s).<br>4 Periodically assess C-A performance for implementation of Laboratory SBMS and internal process. The scope and frequency of assessment areas is based on <ul style="list-style-type: none"> <li>• Importance, status, risk, and complexity of the activity, item or process;</li> <li>• Problems encountered with the activity, or item;</li> <li>• Scheduling of specific activities;</li> <li>• Availability of qualified personnel;</li> <li>• A review of findings reported in previous assessments.</li> </ul> This objective supports those assessments performed in compliance objective. |            |                    |                     |
| Measures   | Indicators | Responsibility     | Schedule/Due Date   |
| ES&H SAM- Maintain ISO 14001 Registration<br>Perform an assessment of the Environmental Management System in accordance with the "Environmental Assessments" Subject Area and C-A OPM 13.10.1, Independent Assessments.  | NA         | EMS Representative | Annual<br>May 2002  |
| <b>Results:</b><br>The C-A EMS Assessment was performed May 21 & 22, 2002. Reports are on file with Melvin Van Essendelft (C-A ECR) from the Environmental Services Division. Four minor nonconformance's were documented and tracked to closure in C-A ATS (1203)   |            |                    |                     |
| <b>Action Items:</b><br>None   |            |                    |                     |
| ES&H SAM- Radiological Control<br>Assess implementation of C-A ALARA program.  | NA         | Q Group            | Annual<br>June 2002 |

|   |  |         |                     |
|---|--|---------|---------------------|
| <u>Results:</u><br>Assessed implementation of the C-A ALARA Program on 12/14/01 (2001-126). There were no nonconformances identified during the assessment.   |  |         |                     |
| <u>Action Items:</u><br>None  |  |         |                     |
| ES&H SAM- Radiological Control<br>Assess implementation and adequacy of C-A calibration programs as applicable to radiological control instrumentation.   | NA                                     | Q Group | Annual<br>June 2002 |
| <u>Results:</u><br>Assessed implementation of the C-A Radiological Control Instrumentation Calibration Program on 8/8/02 (2002-134). There were no nonconformances identified during the assessment.  |  |         |                     |
| <u>Action Items:</u><br>None  |  |         |                     |
| ES&H SAM –Regulated Waste Management<br>Assess implementation of C-A OPM 8.20 Procedure for Handling and Disposal of Hazardous Waste and 8.20.1 C-A Hazardous Waste Trailer (HWT) (90-Day Accumulation Area)                                      | NA                                     | Q Group | Annual<br>June 2002 |
| <u>Results:</u><br>Assessed implementation of the C-A Radiological and Hazardous Waste Disposal Program on 4/22/02 (2002-132). There were no nonconformances identified during the assessment.  |  |         |                     |
| <u>Action Items:</u><br>None  |  |         |                     |
| ES&H SAM – Worker Involvement in Work Planning and Control<br>Assess implementation of C-A OPM 2.28, C-A Procedure For Enhanced Work Planning, key criteria is worker's perspective of their involvement in work planning and control activities. | % of work permits with worker feedback | Q Group | Annual<br>June 2002 |
| <u>Results:</u><br>This assessment was scheduled for 9/02; due to RHIC Startup activities the C-A Work Control Manager requested a postponement of this assessment.   |  |         |                     |
| <u>Action Items:</u><br>Assessment rescheduled for first quarter of CY 03.  |  |         |                     |

|   |                                   |                                  |                         |
|---|-----------------------------------|----------------------------------|-------------------------|
| Infrastructure, Facilities, and Operations SAM- Building Manager Program<br>Assess implementation of C-A OPM 2.31, C-A Building Management.<br>Assessment shall include progress in enhancing Facility Use Agreement documents and processes.   | NA                                | Q Group                          | Annual<br>June 2002     |
| <u>Results:</u><br>The 2002 Site EMS Assessment reviewed the FUA program in detail, which included a review of FUA documents and processes. It was concluded during this assessment that the overall FUA program reflects current BNL policy and requirements.<br><br><u>Action Items:</u><br>None  |                                   |                                  |                         |
| Infrastructure, Facilities, and Operations SAM- Energy Management<br>Assess implementation of C-A OPM 2.30, Monitoring, Controlling and Minimizing Unnecessary Power Consumption by C-A Accelerators  | NA                                | Q Group                          | Annual<br>June 2002     |
| <u>Results:</u><br>Assessed implementation of C-A OPM 2.30, Monitoring, Controlling and Minimizing Unnecessary Power Consumption by C-A Accelerators on 8/22/02. There were no nonconformances identified during the assessment.<br><br><u>Action Items:</u><br>None  |                                   |                                  |                         |
| Measure 3.2.2.2, Transportation Safety Implementation<br>Have C-A personnel who need the BNL Hazardous Material training been identified?<br><br>Have the JTA of those individuals identified as requiring the BNL Hazardous Material training been revised?  | % of required training completed. | Training & Procedures<br>Manager | Semiannual<br>June 2002 |
| <u>Results:</u><br>Individuals requiring Haz Mat Transportation Training have been identified and their JTA's have been revised. Currently, these individuals are:<br>Joel Scott: linked to JTA GE-70C "Haz Mat Transport - On-Site".<br>Richard Savage: linked to JTA GE-70C "Haz Mat Transport - On-Site". (Dick Savage is from the BNL Quality Management Office assigned at C-A).<br><br><u>Action Items:</u><br>None |                                   |                                  |                         |
| Measure 3.2.2.4.1, Chemical Inventories and Accountabilities<br>Assess implementation of C-A OPM 1.8, Hazard Communication Procedure and SBMS Working with Chemicals subject area.  | NA                                | Q Group                          | Annual<br>January 2002  |

Results:

C-A CMS was reviewed in March 2002 (2001-120), the contents/instructions were in accordance with SBMS subject area requirements. Reported action items were documented and tracked to closure in ATS (968.1.2 and 968.1.3) In addition, personnel are performing tasks in accordance with specified requirements.

Action Items:

None

Assess implementation of the following QA procedures  
OPM 13.1.1 Quality and Environmental Management System  
OPM 13.3.2 Nonconformance and Corrective and Preventive Action  
OPM 13.4.1 Records Management  
OPM 13.4.2 Records Index  
OPM 13.6.1 Preparation & Issuance of Engineering Drawings /Specs  
OPM 13.6.2 Configuration Management  
OPM 13.10.1Independent Assessment

NA

Q Group

Annual  
July 2002

Results:

OPM 13.1.1 Quality and Environmental Management System, revised as a result of assessment 2002-138

OPM 13.3.2 Nonconformance and Corrective and Preventive Action, 2002-138

Implementation assessments of OPM 13.4.1, Records Management and OPM 13.4.2, were not performed.

Implementation assessment of OPM 13.6.1 Preparation & Issuance of Engineering Drawings /Specs, and OPM 13.6.2, Configuration Management, were not performed. It should be noted that 2002-140 evaluated C-A's implementation of the BNL Engineering Design Subject Area.

OPM 13.10.1Independent Assessment, implementation verified via 2002-139, however, revised as a result of assessment 2002-138

Action Items:

Implementation assessments for the following procedures shall be scheduled for CY03

OPM 13.4.1, Records Management

OPM 13.4.2, Records Index

OPM 13.6.1 Preparation & Issuance of Engineering Drawings /Specs, and

OPM 13.6.2 Configuration Management

**ASSESSMENT CRITERIA 5: Business and Operational Results**

**OBJECTIVE:**

- 1 Design and construct new accelerator facilities in support of the BNL and national missions.
- 2 Operational
  - a) Operate and improve the suite of proton/heavy ion accelerators and beam transports used to carry out the program of accelerator-based experiments at BNL, thus supporting the research mission of the laboratory's user population.
  - b) Support the experimental program including design, construction, and operation of the beam transports to the experiments plus partial support of detector and research needs of the experiments

**APPROACH:**

- 1 Report construction and operational progress/status to senior management at a frequency established by department/project management.
- 2 Operational:
  - a) The C-A mission is defined in Field Work Proposals (FWP), Conceptual Design Reports and Project Management Plans.
  - b) Changes and upgrades to the accelerators are described in the Accelerator Improvement Projects.
  - c) ES&H improvements are captured in Safety and Health Activity Data Sheets and in the EPA Phase II Process Evaluations.

| Measures  | Indicators | Responsibility                                   | Schedule/Due Date |
|---|------------|--|-------------------|
| Basic Science & Technology:<br>Success in Constructing and Operating Research Facilities <ol style="list-style-type: none"> <li>1. C-A Operations per <a href="#">FY02 Schedule</a> and the accelerator performance meets the operational goals as specified in the FY 2002 Field Work Proposal.</li> <li>2. Meet critical milestones of the Spallation Neutron Source (SNS) as defined in SNS Project Plan.</li> </ol> | NA         | a. Department Chairman<br>b. SNS Project Manager | Per plans         |

**Results:**

C-A operated as required in the FY02 Schedule and accelerator performance achieved the operational goals as specified in the FY 2002 Field Work Proposal.

Per the FY 2002 Year-End Self Evaluation Report, Objective: 1.3, Success in Constructing and Operating Research Facilities, Performance Measure: 1.3.5, SNS-Spallation Neutron Source Project, the milestones identified in the work packages that cover FY 2002 work have been fulfilled.

- C-A performance was outstanding
- All critical milestones have been met.
- Long-lead procurements have been placed.
- Preparations are under way to fully obligate the ~\$29 M in FY 2002 funding.

**Action Items:**

None

| <i>ASSESSMENT CRITERIA 6:</i> Compliance with Laws Regulations and Contractual Requirements  |            |                          |                                      |
|--|------------|--------------------------|--------------------------------------|
| <p><i>OBJECTIVE:</i><br/>Maintain compliance with applicable BNL regulations and contractual expectations.</p>   |            |                          |                                      |
| <p><i>APPROACH</i></p> <ol style="list-style-type: none"> <li>Compliance requirements are communicated to C-A staff through participation on Laboratory committees, Laboratory Work Groups and through the SBMS. Senior C-A Electrical Engineers and senior C-A staff participate on the Laboratory Electrical Planning Committee, Laboratory Environmental, Health and Safety Committee, Radiation Protection Working Group, Environmental Management System Implementation Group, and Laboratory Electrical Safety Committee, all of which meet regularly.</li> <li>In accordance with the BNL EMS, a regulatory compliance assessment, environmental management review, and EMS assessment shall be performed annually. <ol style="list-style-type: none"> <li>Ensuring compliance to applicable requirements is addressed via scheduled inspections, audits and C-A management, independent and self-assessments. These programs are documented in the C-A OPM, and applicable subject areas. Reports are documented and include a description of the findings, corrective action(s), and identification of responsible individual(s). A general index of C-A ESHQ programs can be found at <a href="http://server.rhichome.bnl.gov/SND/indexoftopics.htm">http://server.rhichome.bnl.gov/SND/indexoftopics.htm</a>.</li> </ol> </li> <li>Perform periodic assessments to determine adequacy and effectiveness of listed strategies to achieve objective.</li> </ol> |            |                          |                                      |
| Measures   | Indicators | Responsibility           | Schedule/Due Date                    |
| <p>(ES&amp;H SAM- Environmental Compliance)<br/>Verify C-A Environmental Compliance Representative (ECR) performs annual reviews of C-A's compliance with regulatory requirements; including</p> <ul style="list-style-type: none"> <li>Air emissions (radioactive and non-radioactive; i.e. Clean Air Act and NESHAPs)</li> <li>PCB Management</li> </ul>   | NA         | Associate Chair for ESHQ | Annual<br>May 2002                   |
| <p><u>Results:</u><br/>Per E. Lessard, the ECR and others have performed required air sampling and PCB inventory.</p> <p><u>Action Items:</u><br/>None</p>   |            |                          |                                      |
| <p>Radiological Control Excellence:<br/>C-A Collective Dose Goal for FY 02 is 23.0 person-rem<br/>This was the recommended dose goal as stated in the "Minutes from a review of the proposed C-A dose goal for FY 02", dated 10/22/2001.</p>   | NA         | Associate Chair for ESHQ | Quarterly<br>(Performance Indicator) |
| <p><u>Results:</u><br/>As reported by P. Cirnigliaro, 12/6/02, in the "<a href="#">Performance Indicators for C-A Department</a>" for the Third Quarter of CY02", the collective dose through the third quarter of FY02 was 22.9 person-rem.</p> <p><u>Action Items:</u><br/>None</p>  |            |                          |                                      |

|  |                   |                          |                                      |                 |                        |                   |                      |             |    |                          |                                      |
|--|-------------------|--------------------------|--------------------------------------|-----------------|------------------------|-------------------|----------------------|-------------|----|--------------------------|--------------------------------------|
| Measure 3.2.2.3 - OSHA Reportable Injury Management<br>Total Recordable Case Rate (TRCR), CY 02 Goal = 1.5<br>Lost Workday Case Rate (LWCR) CY 02 Goal = .5<br>Lost Workday Rate (LWDR) CY 02 Goal = 25  | NA                | Associate Chair for ESHQ | Quarterly<br>(Performance Indicator) |                 |                        |                   |                      |             |    |                          |                                      |
| <u>Results:</u><br>Per P. Cirnigliaro and E. Lessard, the Collider-Accelerator Department Statistics for CY 01/01/02 through 12/31/02 are as follows.<br>TRCR 2.08<br>LWCR 1.16<br>LWDR 47.21<br><br><u>Action Items:</u><br>The C-A 2002 Fourth Quarter Performance Indicator Report will address the causes and actions to be taken to address improving the TRCR, LWCR and LWDR.  |                   |                          |                                      |                 |                        |                   |                      |             |    |                          |                                      |
| Environmental Excellence<br>Waste Management Divisions 2002 allocated volumes of waste for C-A. C-A Environmental Coordinator concurred with allocated volumes<br><table><tr><td><u>Goal</u></td><td><u>Waste Type</u></td></tr><tr><td>450 ft<sup>3</sup>.</td><td>Hazardous Waste</td></tr><tr><td>3000 ft<sup>3</sup>.</td><td>Radioactive Waste</td></tr><tr><td>45 ft<sup>3</sup>.</td><td>Mixed Waste</td></tr></table>  | <u>Goal</u>       | <u>Waste Type</u>        | 450 ft <sup>3</sup> .                | Hazardous Waste | 3000 ft <sup>3</sup> . | Radioactive Waste | 45 ft <sup>3</sup> . | Mixed Waste | NA | Associate Chair for ESHQ | Quarterly<br>(Performance Indicator) |
| <u>Goal</u>  | <u>Waste Type</u> |                          |                                      |                 |                        |                   |                      |             |    |                          |                                      |
| 450 ft <sup>3</sup> .  | Hazardous Waste   |                          |                                      |                 |                        |                   |                      |             |    |                          |                                      |
| 3000 ft <sup>3</sup> .   | Radioactive Waste |                          |                                      |                 |                        |                   |                      |             |    |                          |                                      |
| 45 ft <sup>3</sup> .   | Mixed Waste       |                          |                                      |                 |                        |                   |                      |             |    |                          |                                      |
| <u>Results:</u><br>Per J. Scott, C-A waste generation as compared to the BNL Waste Management Division 2002 projected goals is as follows:<br><br>-C-A exceeded the 2002 projected volumes for hazardous waste due to BNL cleanup program. No charge back was incurred by C-A.<br>-Radioactive waste generated by C-A was below the 2002 projected volumes.<br>-Mixed waste generated by C-A was below the 2002 projected volumes.<br><br><u>Action Items:</u><br>None |                   |                          |                                      |                 |                        |                   |                      |             |    |                          |                                      |
| Measure 3.2.1 - Legacy ES&H Risk Management<br>Establish a site hazard footprint for the following areas. A “footprint” is defined as records in the form of drawings, databases, and other documents, which collectively define the scope of the hazard.<br>AGS Lead Yard<br>AGS Steel Yard<br>AGS Block Yard   | NA                | Associate Chair for ESHQ | Annual<br>August 2002                |                 |                        |                   |                      |             |    |                          |                                      |



|   |                                      |                          |                       |
|---|--------------------------------------|--------------------------|-----------------------|
| <u>Results:</u><br>Per J. Scott, required documentation has been collected and will be maintained by the C-A Environmental Coordinator.   |                                      |                          |                       |
| <u>Action Items:</u><br>None  |                                      |                          |                       |
| Measure 3.2.2.1 Pollution Prevention<br>Verify that C-A is actively involved in the BNL Pollution Prevention Program. i.e. by submitting at least two pollution prevention project proposals to the P2 Council and/or two success stories and/or lesson learned stories | NA                                   | Associate Chair for ESHQ | Annual<br>May 2002    |
| <u>Results:</u><br>Per George Goode (ESD), this measure has been addressed by the P2 associated with BAF design and P2 in magnet recycling.   |                                      |                          |                       |
| <u>Action Items:</u><br>None  |                                      |                          |                       |
| Report percent of scheduled assessments completed.  | % of required assessments completed. | Q Group                  | Annual<br>August 2002 |
| <u>Results:</u><br>For CY 02, 88% of scheduled assessments were completed.  |                                      |                          |                       |
| <u>Action Items:</u><br>Four assessments, two related to Records and two for Configuration/Drawing Control were rescheduled for CY03. Refer to ATS 909.4.10.  |                                      |                          |                       |